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ABSTRACT

Two experiments involving 49 male and 49 female college students were conducted to determine the effects of physician physical attractiveness on the patients' disclosures of personal information (symptoms). In the first experiment, subjects rated pictures of physicians for physical attractiveness and reported their willingness to disclose and discuss with each physician various symptoms and fears related to private parts of the body, mental illness, and nonprivate parts of the body. In the second experiment, subjects were given pictures of the two most attractive and two least attractive physicians as revealed in the first study and asked to report their willingness to disclose symptoms related to the same three areas. Results from the first experiment showed that willingness to disclose symptoms to a male physician was found to be related to the physician's physical attractiveness and the types of symptoms, but not the sex of the patient. The second experiment replicated the findings of the first experiment, with the additional finding that increased symptom disclosure was associated with patients who had higher self-esteem and internal locus of control--but only when disclosing the information to the less attractive physicians. (RL)

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Willingness to Disclose Symptoms to a Male Physician: Effects of the Physician's Physical Attractiveness, Body Area of Symptom and the Patient's Self-Esteem, Locus of Control and Sex

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Running Head: Willingness to Disclose Symptoms to a Physician

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Willingness to Disclose Symptoms to a Male Physician: Effects of the Physician's Physical Attractiveness, Body Area of Symptom the Patient's Self-Esteem Locus of Control and Sex

Delivery of effective health care requires that the patient participate in a problem-solving process with the physician (Clyne, 1972; Brown and Freeling, 1967) by providing the physician with accurate and timely information (Zand, 1972; Vroom and Yetton, 1972) concerning the symptoms the patient is experiencing. This research addresses the following central question: "What influences how much a patient tells the physician when he 'goes to the doctor'"? Stated alternatively, "What facilitates and inhibits a patient's willingness to disclose his symptoms and fears during the examination interview"? The fact that patients do withhold symptoms from the physician has been established in the literature on delay in seeking medical help for experienced symptoms. (For example see Antonovsky and Hartman, 1974, for a review of the literature on patient's hesitancy to disclose symptoms and fears of cancer). Since hesitancy to disclose symptoms and fears exists in the patient's decision to go to the doctor, a reasonable expectation is that the same (or a similar) hesitancy process may also operate in the patient's decision to choose how much to tell the physician during the doctor-patient examination interview. Drawing upon the literatures on the health belief model (Kirscht, 1974; Becher, et al 1977), self disclosure of personal information (Jourard, 1971, 1970) and the effects of physical attractiveness in interpersonal relationships (Berscheid and Walster, 1974), the first experiment was designed to address the question above. The second experiment was designed to replicate and extend the first experiment by also examining potential

influences on symptom disclosure of the patients' self-esteem (see Wells and Marwell, 1976 for a critical introduction) and locus of perceived personal control over one's environment (Rotter, 1966).

EXPERIMENT 1

If the ultimate benefits of successful treatment and cure are to be realized, the patient must help the physician solve the problem of diagnosis by reporting the symptoms (Clyne, 1972; Browne and Freeling, 1967). However, following the general health beliefs model (Kirscht, 1974; Becker, et al, 1977), the reporting of the symptoms could conceivably lead to threatening, undesirable outcomes, such as, realizing one has a terminal and/or very painful ailment. Also reporting one's symptoms could result in being treated in a socially embarrassing or demeaning manner (Stimson and Webb, 1975). Effective problem-solving in such situations requires that the subordinate party, the patient, trust the superordinate party, the physician (Zand, 1972). Theoretically, this "trust," or willingness to expose oneself, may be related to a "physical attractiveness stereotype" (Berscheid and Walster, 1974) in which all good things, including trustworthiness, are attributed to people who are physically attractive.

In a review of the literature on how the physical attractiveness of a person influences the way others relate to the person, Berscheid and Walster (1974) conclude that strong evidence exists for a "physical attractiveness stereotype" in which most socially desirable traits are attributed to attractive people. (For example some of the specific traits include warm, sensitive, responsive, nurturant, kind, outgoing, and modest, p. 169). Cash (1975) added trustworthy, likable, and intelligent to the list of traits and additionally found that subjects expected more favorable

outcomes from attractive, compared with unattractive, counselors. These traits carry a significant degree of positive evaluation of another as shown by Russell and Mehrabian (1977) either directly (as for the traits "kind" and "modest") or indirectly (as for all of the remaining traits except "intelligent" which was not inferrable from their data). Young (1978) has reported that positive evaluation (Osgood, et al, 1957) descriptions of another are highly correlated with descriptions of the other's perceived trustworthiness (r = .96) and that willingness to disclose potentially damaging personal information to another is related to a combined measure of positive evaluation and trustworthiness (r = .45 n = 120). Hence, it was hypothesized that, compared to a less physically attractive physician, patients would be more willing to report their symptoms and fears to a more physically attractive physician since the more attractive one would be seen as more trustworthy and less likely to take advantage of the patient's vulnerability.

The sex of the discloser has received much attention in the literature on self-disclosure--but with equivocal results. In many instances females have been found to disclose more than males (Young, 1978; Jourard, 1964, 1971; Littlefield, 1974, Rychman, et al., 1973; Kopfstein and Kopfstein, 1973). However, others have found no differences between males and females (Mulcaby, 1973; Kohen, 1975) giving rise to the interpretation that the effects of sex of disclosure is contingent upon other factors in the situation including the other person's sex (Brooks, 1974; Turner 1975). Brooks (1974) and Turner (1975) found self disclosure and positive evaluation greater in mixed sex dyads respectively. Since, in the research reported below, only male physicians were used, it was hypothesized that females would be more willing to disclose their symptoms and fears than males.

Since this culture appears to attach social embarrassment to sexual and elimination behaviors as well as to having emotional problems, it was expected that subjects would be less willing to report symptoms or fears related to the sexual/elimination body parts or mental illness than to symptoms and fears dealing with the rest of the body.

Method

Subjects and Procedure

Forty-eight upperclassmen (24 male, 24 female) at a large state university participated as subjects for extra course credit in the introductory course to Management. Students were given picutres of 16 male family practice physicians who were doing their family practice residency and who spent part of that residency at the University infirmary. Each picture was rated for physical attractiveness. Then subjects reported their willingness to disclose and discuss with each physician various symptoms and fears related to a) private parts of the body (i.e. elimination and sexual body areas), b) mental illness and c) non-private parts of the body. A 4 (levels of physical attractiveness) by 2 (sex of subject/patient) by 3 (body area of ailment) factorial design was used with four physicians nested within each level of physical attractiveness.

Independent Variables

Sex of patient. The sex of patient was manipulated by using half males and half females as subjects.

Physical attractiveness of the physician. The physical attractiveness of the physician was manipulated by the following process: a) First, each subject evaluated the physical attractiveness of each physician's picture using 3 items; b) next, the average attractiveness for each physician was computed, and then c) based on the average attractiveness score, each

physician was assigned to one of four levels of attractiveness. That is, the four physicians having the four lowest average scores were assigned to the "Low Attractiveness" category; those with the next highest average scores were assigned to the "Moderately Low" category; the next four were assigned to the "Moderately High" category; and the four physicians with the highest average scores were assigned to the "High Attractiveness" category.

Body area of the ailment. Body area of the ailment was manipulated by asking subjects to rate their willingness to disclose symptoms and fears having to do with a) the private areas of the body (fear of having VD, bleeding when you urinate, rectal bleeding, genital sore and sore near anus); b) the non-private parts of the body (fear of having cancer, fear of going blind, fear of becoming paralyzed, fear of having an ulcer, having terrible headaches); and c) emotional or mental-illness related problems (fear of going crazy, have been thinking of suicide, feeling very depressed and fearful). These thirteen items, along with a general item (fear of having the "most embarrassing illness you can thing of") were selected from a pretest in which willingness to disclose several fears and symptoms, previously identified as particularly frightening and/or embarrassing, were factor analyzed and in which the three main factors of body area were identified. The fourteen items above were selected for their strong loading on their respective factor.

Dependent Variable

Willingness to disclose symptoms and fears related to each of the three body areas was measured by having subjects answer the following question for each of the 14 items listed above (in the body area manipulation discussion):

"How easy/difficult would it be to discuss each of the following issues with the physician picture above?" The scale ranged from +2 to -2 (in which +2 = "Extremely easy to discuss fully; no resistance; would hold nothing back"; 0 = "Moderately easy; some resistance; would hold back some of your fears and symptoms" and -2 = "Extremely hard to discuss; great resistance; would hold back most information".) The dependent variable was computed by averaging the subject's willingness to disclose for each of the three body areas for each physician.

Results and Discussion

Findings indicate that, as expected, willingness to disclose is affected by the physical attractiveness of the physician and by the related body area of the symptom or fear. No effects due to the sex of the subject were found, but a sex-of-patient by body area interaction effect was uncovered.

Physical attractiveness hypothesis. Subjects were more willing to discuss their symptoms and fears with the more attractive physicians than with the less attractive physicians ($F(3, 1692)$[1] $= 9.75$, $p < .001$). The means of willingness to disclose averaged over the three body areas for the four levels of attractiveness were .207, .445, .523 and .688 for the least to the most attractive physicians respectively.

Body-area-of-the-ailment-hypothesis. As expected, subjects reported to be more willing to disclose and discuss general, non-private symptoms and fears than sumptoms and fears related to private body areas and/or mental illness ($F(2, 1128) = 47.70$, $p < .001$). The means for disclosure willingness were -0.011, 0.245, and 1.164 for mental, private and general symptoms and fears, respectively.

Sex-of-the-patient hypothesis. There was no effect on willingness to disclose (means = 0.474 and 0.458) for males and females respectively ($F(1, 564) = 0.007$, $p > .25$).

Additional results. There was a significant two-way interaction effect on disclosure willingness between patient's sex and the body area of the symptom or fear ($F(2, 1128) = 4.335$, $p. < .05$). This effect was due to the female's being more willing than males to report the general symptoms and fears (means = 1.349, and 0.979 respectively); whereas, males were more willing than females to report private symptoms and fears (means = 0.429 0.429 and 0.060, respectively). There was no sex difference found on reporting mental illness symptoms (means = 0.013 and -0.036 for males and females respectively, $p. > .25$).

Experiment 1 supported the hypothesis that patients would be more willing to assist the attractive physician in the diagnosis phase of doctor-patient problem solving than they would the unattractive physician. Additionally, it was found that discussing mental health and/or private body area symptoms is considerably more difficult than those symptoms related to less socially taboo areas of ailments. The lack of sex difference adds to currently developing empirical literature that contends that level of self disclosure is contingent upon elements in the immediate, decision-related environment (Brooks, 1974; Turner, 1975) rather on sex per se. The sex by body area interaction effect raises the issue of whether females are more sensitive to potentially embarrassing conversations with male physicians.

Two variables upon which the patient's decision to disclose symptoms and fears may be contingent are the individual differences in self-esteem and internal external locus of control that the patient brings to the doctor-

patient interaction. These possible contingencies were addressed in the second experiment.

EXPERIMENT 2

The purposes of experiment 2 were to replicate experiment 1, to examine the effects of the patient's self-esteem and locus of control upon the willingness to disclose symptoms and fears and to observe if the attribution of competence is associated with physical attractiveness. The self-esteem question asks: "Do patients who have a good self concept (i.e. really like themselves as they are) disclose their symptoms and fears more readily than patients with low self concepts?"

The general "naive" logic underlying the self esteem question is as follows: The better one feels about oneself the more one wants to take care of oneself and the less threatening potential social disapproval is. That is, people with high self esteem would appear to have more to gain and less to lose by telling the physician all that is necessary to maintain ones health. However, the literature on the effects of self esteem upon self disclosure is not as clear cut as the above logic might imply.

Even though Ellison (1972) and Rosenberg (1965) found such a positive relationship between disclosure and self esteem, Vance and Richmond (1975) and Doyne (197_2) found a negative relationship. Adding to the uncertainty of the relationship, high disclosure (defined generally as any act of exposing ones vulnerability to another (Young, 1977) and variously operationalized as cooperative behavior, openness, confiding in, deep self exploration, high self disclosure) has been associated with not only <u>high</u> levels of self esteem (Coppersmith, 1967; Ziller, 1969) but <u>also</u> low levels of self esteem (Cohen, 1959; Byrne, 1961, 1963; Zigler and Achenback, 1963) as well as <u>moderate</u> levels of self esteem (Cole et al, 1967; Black and Thomas, 1955;

Combs, et al, 1963; Weissmen & Rittes, 1970). Realizing that these results may reflect non-equivalent definitions and measures of disclosure, this experiment examined whether the uncertain pattern results from self-esteem's effect being moderated by other variables, in this case physical attractiveness.

The second purpose of this experiment was to examine possible effects on disclosure willingness of locus of control (Rotter, 1966; Wallsten and Wallsten, 1976). The locus of control question asks: "Do patients who believe they can personally control or influence their own state of health report their symptoms and fears more readily than patients who believe that their health is a matter of luck, chance, or forces outside their own personal control?"

Internal-external locus of control (Rotter, 1966) refers to the degree to which people believe that they control events on their life (internal control) versus believing that events in ones life are not personally controllable (external control). Strickland (1973, referenced in Wallsten et al, 1976), after citing eleven supporting studies, concludes that belief in internal control is positively related to physical health and well-being. Translated into the current research this means that persons who believe that they can personally exert some influence over their life (and health), will exercise that power by reporting their symptoms to a physician--and <u>not</u> leave their health to chance. However, Wallsten et al (1976) cites two instances in which just the <u>opposite</u> was found. As with the literature on self-esteem, the current study interprets these equivocal results as possibly reflecting a more complex moderating effect and speculates that internal-external locus of control may affect symptom disclosure--but only within certain categories of attractiveness and/or body area of ailment.

Finally, the way in which the physician relates to the patient affects the patient's satisfaction (see for example, Ben-sira, 1976; Korsch and Negrete, 1972) as well as with compliance with prescribed regimines (Korsch, Gozzia, Francis, 1968,) Since this social competence as well as the "technical competence" necessary to effectively treat patient's illnesses are obviously "good" attributes for a physician to have, it was expected that the physical attractiveness stereotype (Berscheid and Walster, 1974) would cause physical attractiveness to be related with social and technical competence.

Method

Subjects and Procedure

Fifty upperclassmen (25 male, 25 female) in the College of Business Administration at a large state university participated as subjects for extra course credit in the introductory course in Management. Using the results of the experiment above, subjects were given pictures of the two most physically attractive and the two least physically attractive physicians and were asked to report their willingness to disclose symptoms related to private body areas, general body areas and mental illness. A 2 (physical attractiveness) by 2 (sex of patient) by 3 (body area) factorial design was utilized. Each subject also completed several individual difference questionnaires.

Independent Variables

Physical attractiveness of the physician. Physical attractiveness scores from experiment 1 were used to identify the two most attractive physicians (means = 4.84 and 4.55 using a 1-7 scale) and the two least attractive physicians (means = 3.16 and 3.45). T-tests confirmed that each of the two high attractive means were significantly greater ($p < .01$) than each of the two low attractive means.

Patient sex and body area. Sex of patient and the body area of the symptom or fear were manipulated identically as in experiment 1.

Self esteem. The self esteem of the patient was measured using the Tennessee Self Concept Scale (Fitts, 1964), Secord and Jourard's (1953) Self and Body Cathexis Scale. The Tennessee Self Concept Scale (TSCS) provides a measure of not only a general self concept and eight interrelated sub-scales (including one's moral-ethical self, Physical self, personal self, family self, social self, one's identity, one's behavior and one's self satisfaction). The TSCS also includes a "self-criticism" scale taken from the L-scale of the MMPI, which measures the subjects general tendency to report accurately. The Secord and Jourard scales ask the subject to evaluate one's self esteem by reporting one's satisfaction with 55 personal traits and one's satisfaction with 48 different body parts.

Locus of Control

Locus of control was measured in general with Rotter's (1966) internal/external locus of control scale. Following Rotter's (1975) suggestion that understanding the effects of locus of control in specific behavioral contexts requires the use of I/E data which is relevant to that specific context, Wallsten and Wallsten's (1976) health-care-related locus of control instrument was also administered.

Dependent Variable

Willingness to disclose symptoms and fears related to the three body areas was measured as described in experiment 1.

Additional Variables

Individual differences. The Need for Social Approval Scale (Crowne & Marlowe, 1960) was administered to observe the effects of social desirability upon the subject's responses.

Interpersonal attributions. In addition to the three items assessing the physical attractiveness of the physician, subjects reported their perceptions of each physicians "bedside manner" or interpersonal attractiveness along, bipolar, Likert-like items. The perceived interpersonal competence items included: a) hard to talk to - easy to talk to, b) hostile - friendly, c) will take advantage of people - will not take advantage of people, d) unkind - kind, e) unsociable - sociable, f) upsetting - soothing, g) unsympathetic - sympathetic. The technical competence items included: a) competence - incompetence, b) technically qualified and able - technically unqualified and unable, c) capable - incapable, d) can help me - cannot help me. All items were balanced in presentation order.

Results

The findings of experiment 2 replicate the results of experiment 1: Disclosure was influenced by physical attractiveness, body area, and a sex by private-vs.-general interaction, but not by sex per se. Self esteem and locus of control were generally found to have an effect on symptom/fear disclosure; but only when disclosing to the less attractive physician. Attributions of social and technical competence were associated with disclosure willingness to the more attractive physicians only.

Replication of Experiment 1

Manipulation check for physical attractiveness. The physical attractiveness means for the two low attractive physicians were $m = 2.93$ and $m = 2.97$ compared with means of 4.37 and 5.08 for the two high attractive physicians. Each of the low attractive means is significantly less than each of the high attractive means ($T > 8.50$ for each of the four comparisons, $p < .0001$, $df = 49$ for each).

Effects of physical attractiveness, symptom area and sex. A 2 x 2 x 3 ANOVA found that increased willingness to disclose was associated with: a) higher physical attractiveness ($F(1, 98) = 8.00$ $p < .01$) b) general body area compared to private areas or mental illness ($F(2, 196) = 40.035$, $p < .001$). Also as in experiment 1, symptom disclosure was not related to the sex of the patient ($F(1, 98) = 0.919$, $p > .25$). The sex by personal vs. general body area interaction found in experiment was replicated ($F(1, 98) = 7.90$, $p < .02$). The full model sex by body area (general, private and mental) interaction was not significant ($F(2, 196) = 2.274$, $p > .25$).

Additional support for the effect of physical attractiveness was found in the relationship between disclosure and the Crowne-Marlow measure of need for social approval. Need for social approval is a measure of a person's tendency to bias one's response in order to gain social approval from significant others, usually the researcher in experimental settings (Orne, 1969). Need for social approval was not correlated with average disclosure to the high attractive physicians ($r = .064$, $p > .32$), but was positively correlated with disclosure to the low attractive physicians ($r = .440$, $p < .001$). That is, as the subject's need for social approval increased, they tended to report more willingness to disclose symptoms to the less attractive but not the more attractive physician. This correlation held for each of the three types of disclosure to the low attractive physician ($r = .360$, $p < .005$, for personal symptoms; $r = .368$, $p < .004$, for mental symptoms; and, $r = .353$, $p < .006$, for general symptoms). This was interpreted to mean that the observed significant difference in disclosure level due to the physician's physical attractiveness (as shown by the ANOVA results) was observed in spite of a tendency by the subjects to reduce the magnitude of the difference in their

attempt to receive social approval (presumably from the experimenter). Similar, but not statistically significant results were observed in the relationship between the disclosure level and the self-criticism subscale of the TSCS.

Effects of Patients's Self-Esteem on Symptom Disclosure

Higher self esteem, as measured by the Tennessee Self Concept Scale and by the Body Cathexis Scale, increased the patient's willingness to disclose symptoms and fears to the less attractive but not to the more attractive physician.

Overall disclosure was not significantly correlated with the total TSCS score ($r = .198$, $p > .08$), body cathexis ($r = .185$, $p > .09$), or self cathexis

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INSERT TABLE 1 ABOUT HERE

($r = .102$, $p > .24$). However, as shown in Table 1, disclosure to the less attractive physician was positively correlated with the Tennessee total score ($r = .325$, $p < .01$) and the body cathexis score ($r = .270$, $p < .05$).

Four subscales of the TSCS were correlated with disclosure to the less attractive physician--social ($r = .464$, $p < .001$), behavior ($r = .481$, $p < .001$), physical ($r = .290$, $p < .05$) and self satisfaction ($r = .260$, $p < .05$). Both the social and behavior esteem scores were significantly correlated across all three types of ailment (personal, mental and general). However, physical and self satisfaction were correlated with disclosure of personal and general symptoms but not mental illness fears. Mental illness disclosure to less attractive physicians was correlated with body cathexis ($r = .293$, $p < .05$).

Regression analyses were conducted to examine the relative importance of the various self-esteem measures discussed above for explaining variance in symptom and fear disclosure. Since the subscales of the TSCS are highly intercorrelated (see Table 2) and since body-cathexis and self-cathexis are moderately correlated (r = .51), the multiple regressions could only contain two predictors of disclosure at a time without endangering the analysis with multicollinearity. The two predictors included: a) either body-cathexis or self-cathexis with, b) each of the TSCS scores individually. Separate analyses of the eight dependent variables (i.e., average overall disclosure, personal disclosure, mental illness disclosure and general disclosure--each to the more attractive physician and also to the less attractive physician) were run. Consistent with the correlation data, in Table 1, self-esteem was

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INSERT TABLE 2 ABOUT HERE

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not related to any measure of disclosure to the more attractive physician. However, for disclosure to the less attractive physician, both the social esteem and the behavior esteem subscales of the TSCS were consistently and positively related to disclosure in three of the four categories (average, personal, and general). Furthermore, social and behavior esteem each dominated the other esteem measures self-cathexis and body-cathexis each of which had non-significant regression coefficients. The one exception was for disclosure of mental illness in which behavior but not social was significantly related to disclosure. In addition to behavior's effect on mental disclosure, personal esteem and family esteem were related also.

Additional multiple regressions were conducted in order to assess the ability of the primary self-esteem measures (identified in the correlational analysis) to predict or capture the variance in disclosure. (The muliticol-

linearity is not a problem since the relative importance of the various explanatory variables is not the focus . Four self-esteem measures (social, behavior, physical and total) capture 43% of the variance in average disclosure to the less attractive physician, but only a non-significant 8% to the more attractive physician.

Additionally, regressions using as independent variables those esteem measures that had significant zero-order correlations with disclosure capture 50%, 24% and 26% of the disclosure variance to the less attractive physicians for personal, mental and general ailment types, respectively, compared with 11%, 4% and 7% to the more attractive physician.

Locus of Control

The health-care-related locus of control measure was correlated with average disclosure to the more attractive physician ($r = -.308$, $p < .02$) but not to the more attractive physician ($r = -.153$, $p > .15$). Rotter's (1966) I-E measure was correlated with the overall disclosure ($r = -.274$, $p < .03$) and with disclosure to the less attractive physician ($r = -.271$, $p < .03$) but only marginally associated with disclosure to the more attractive ($r = .21$, $p < .08$). That is, as subjects became more internal their symptom disclosure increased. This relationship was traced primarily to disclosure of personal symptoms ($r = -.314$, $p < .02$ and $-.327$, $p < .02$ to the more and less attractive physicians respectively). This pattern was found in personal and general disclosure to the less attractive physician ($r's = -.307$ and $-.253$, $p < .01$ and $< .04$, respectively) but not to the more attractive physician ($r's = -.148$ and $-.161$, $p > .13$ in each case). Hence, the more in control of one's personal health a person feels, the more willing he is to disclose personal and general fears and symptoms to less physically attractive physicians. As with self esteem, disclosure to the more attractive physician was not sensitive to this

measure of individual difference.

Attributions of Competence

Reported physical attractiveness, physician's bedside manner (social competence) and technical competence were substantially inter-correlated supporting the physical attractiveness stereotype hypothesis. Table 3 shows the relationships among these three variables when broken down by the attractiveness level of the physician whom they are evaluating.

INSERT TABLE 3 ABOUT HERE

As with self esteem, the level of physical attractiveness tends to moderate the effects of perceived bedside manner and technical competence on symptom disclosure (see Table 4). When dealing with an attractive physician, attributed social and technical competence have little effect on disclosure; however, when dealing with an unattractive physician, bedside manner and perceived technical competence are correlated one's willingness to disclose.

Discussion

The findings support the hypothesis that increased physical attractiveness of a male physician does result in a greater reported willingness to disclose and discuss symptoms and fears. Likewise, support was found for the hypothesis that ailments and fears related to private, sexual and/or mental ilness symptom areas are more difficult to disclose than fears related to other symptom areas. Subjects with higher self esteem and internal health-related locus of control reported more symptom disclosure. No support was found for the hypothesis that females would disclose more to male physicians than males would.

This research supports the existence of a physical attractiveness stereotype (Berscheid and Walster, 1974) that has positive effects upon disclosure in

a theraputic situation (Cash, et al, 1975). Not only did higher levels of physical attractiveness lead to more symptom and fear disclosure of all types, but also increased physical attractiveness resulted in the attribution of greater technical and social competence--even though no technical or social information was presented or inferred in the experimental situation.

Self esteem seems to have an influence on one's disclosure to less attractive physicians only. One's attitude toward the way one acts and functions (the behavior esteem) as well as how one perceives oneself in relation to others in general (the social self) are particularly important contingencies of disclosure.

This research suggests further development of the following theoretical implications and issues:

1) Does the sex by symptom area effect indicate a heterosexual interpersonal attraction/impression management process? All task-related interpersonal relationships contain both task and social components (Herold, 1977). When one goes to the doctor, the task component is central: attending to the symptoms present. However, it is reasonable to hypothesize that when the patient and physician are of opposite sex, the social component is more salient than when they are of the same sex. This heightened social component could be evidenced by a greater willingness to discuss non-embarrassing, general symptoms in order to manage a more positive, socially desirable social impression. A follow-up experiment with female as well as male physicians would test this hypothesis.

2) How does this physical attraction effect fit into the overal doctor-patient relationship? The results of this research imply an effect due to one's first impression of the physician. Possible dysfunctional first impressions may or, as Stimson and Webb (1976) and Negrete (1972)

demonstrate, may not be changed as the relationship unfolds over time. The present research may shed some light on why ongoing low-trust relationships maintain themselves.

3) Does the patient's decision to disclose or withhold symptoms and fears reflect the pattern of good and bad possible outcomes developed elsewhere (Young, 1977) as a "trust relevant choice dilemma"? This choice-dilemma is a translation of the benefits and threats of the health belief model into a format that will allow the ultimate behavioral predispositions to be traced to the patient's specific beliefs about the social and/or the technical health outcomes of the doctor-patient interaction.

Realizing that it is premature to draw specific practical implications from these results without much further research in both experimental and naturalistic settings, these results tend to point toward a possible need for patient education, as well as possible physician education. If the effects of the physical attractiveness first impression generalize to natural settings, especially for patients with low self esteem and and/or and external locus of control, early identification of potential withholders and follow-up education efforts designed to overcome then hesitancy to disclose may be useful. Correspondingly, training physicians in interaction styles designed to turn dysfunctional first impressions into an over-time, trusting relationship could possibly ameliorate the low-disclosing, untrusting relationships described by Stimson and Webb (1976).

These results should be interpreted within the context of the research setting. Subjects could only observe a photograph of a physician rather than a more informative stimulus such as a direct or video-taped observation of the physician working with a series of patients. Also, subjects recieved no task

relevant information, such as the physicians competence. Hence, only the effects of stereotypically induced first impressions could be observed. Future research should validate the result above by examining the disclosure of specific symptoms in more and more specific and natural situations.

In summary, this research supports the notion that perceived physical attractiveness of a male physician affects the patient's willingness to disclose, especially if the symptoms with sexual and/or mental illness issues. Additionally patients who have low self esteem and/or an external locus of control will have added difficulty when dealing with a less physically attractive physician. More theory-testing research is called for before definite patient and/or physician educational interventions are prescribed.

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Footnotes

1. See Lindquist's (1953) discussion of nested ANOVA's for the computation of the degrees of freedom.

TABLE 1

Significant Correlations Between Symptom Disclosure and Individual Difference Measures

MEASURE OF INDIVIDUAL DIFFERENCE	AVERAGE DISCLOSURE TO: MORE ATTRACTIVE PHYSICIAN	AVERAGE DISCLOSURE TO: LESS ATTRACTIVE PHYSICIAN	SELF CRITICISM SCALE
1. SELF-ESTEEM			
a) Body Cathexis	NS	.270*	NS
b) Self Cathexis	NS	NS	NS
c) Tennessee Total	NS	.325**	-.319*
Physical Subscale	NS	.290*	-.311*
Social Subscale	NS	.464***	NS
Behavior Subscale	NS	.481***	-.224
Self-Satisfaction Subscale	NS	.260*	-.311
Self-Criticism	NS	NS	1.00
2. I-E LOCUS OF CONTROL			
a) Rotter I-E Scale	NS	-.271*	.12
b) Health-Related IE	NS	-.308*	-.06

TABLE 2

Intercorrelations Among the Self-Esteem Variables

	BODY CATHEXIS	SELF CATHEXIS	TENNESSEE	SELF CRITICISM	PHYSICAL	MORAL/ETHICAL	PERSONAL	FAMILY	SOCIAL	IDENTITY	SELF SATISFACTION	BEHAVIOR
BODY CATHEXIS	--											
SELF CATHEXIS	507	--										
TENNESSEE	244	264	--									
SELF CRITICISM			-318	--								
PHYSICAL	377		717	-311	--							
MORAL-ETHICAL			765		423	--						
PERSONAL		343	692	-364	462	363						
FAMILY			787		382	519	406	--				
SOCIAL	336	249	729		398	425	387	488	--			
IDENTITY		263	762	-260	684	462	523	574	579	--		
SELF-SATISFACTION			890	-311	605	766	666	731	514	468	--	
BEHAVIOR	309	249	881	-224	548	669	543	675	812	573	691	--

Note: Only the statistically significant correlations are included in this table and decimal points have been omitted.

for n = 50, $r \geq .273$, $P<.05$

$r \geq .354$, $P<.01$

TABLE 3

Pearson Correlations Within High and Low Attractiveness Conditions

	High Attractive MD Condition			Low Attractive MD Condition		
	Physical Attractiveness	Social Competence	Technical Competence	Physical Attractiveness	Social Competence	Technical Competence
Physical Attractiveness	1.00			1.00		
Social Competence	.473**	1.00		.391**	1.00	
Technical Competence	.579**	.712**	1.00	.322*	.601**	1.00

n = 50

*p < .01

**p < .001

Table 4

Correlations Between Interpersonal Attributions and Total Disclosure

High Attractive Physician Condition		Low Attractive Physician Condition	
Correlation between Symptom disclosure and:		Correlation between Symptom disclosure and:	
a) Attractiveness	.175 (NS)	a) Attractiveness	.272*
b) Social Competence	.082 (NS)	b) Social Competence	.400**
c) Technical Competence	-.016 (NS)	c) Technical Competence	.407**

*P<.03, n = 50

**P<.002, n = 50